



WDC 14-056 - Whakatane Central Business District Geotechnical Investigation

Data Delivery Report

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11/4/2014

Site investigation relating to the ground investigation of the Whakatane central business district as defined by the Geotechnical Investigation Form



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2 Exploratory Boreholes

2.1 Scope of Work

IRBA subcontracted the borehole drilling to GEOTECH Drilling, specialists in geotechnical and environmental investigations.

2.2 Plant and Equipment.

GEOTECH supplied a tractor mounted SONIC rig for continuous core recovery (Figure 1), with a retractable SPT boom to facilitate SPT recordings at 1.5m intervals.



Figure 1. GEOTECH sonic rig, BH 4

Drill hole setup followed the contractor site walkabout with GEOTECH drilling, followed by the WDC site walkabout where adjusted borehole and CPT mark outs were discussed and approved, along with the Contract Work Programme.

Several other locations were adjusted during the programme following discussion with the WDC representative, either to avoid danger to underground services, or to minimise interaction with pedestrian traffic (WHK BH 5).

Final borehole locations were determined to within 0.5m using GPS and site photographs.

10 drillholes were completed (WHK_BH 1-10) in positions designated by WDC site representatives, accommodating minor geographic shifts to avoid underground services or significant above ground facilities.

Sites are illustrated in Figure 2, overlying CBD photography.



Figure 2. CBD bore hole locations

2.3 Measurement and Tolerances

All drilling units, measurements and accuracy tolerances have been adhered to.

2.4 Obstructions

Obstructions were encountered on three CPT holes, in each case it was verified by the geologist that basement had been intercepted at less than 1m, this was brought to the attention of the WDC representative.

2.5 Method of drilling

Sonic drilling was recommended as the most appropriate method of drilling achieving very high recovery and large diameter samples suitable for stratigraphic mapping.

2.6 Flushing medium

Fresh water supplied from WDC was the only drilling additive used, volumes were recorded both in uptake of water from the WDC, and from daily recording of water usage (~1000l/10m drilling).

2.7 Temporary Casing

All holes were continuously cased, until refusal of penetration. All casing was removed. As free running sands were frequently encountered it was not unusual for ingress of sand at the bottom of the hole despite continuous casing. This was flushed out prior to STP/further coring.

2.8 Ground Water Observations

Boreholes were dipped using an electronic dip sensor, and recorded on Daily report sheets.



These records have been digitised onto the IRBA Geotechnical logs, and are included in the digital data inventory as a CSV file. CPT logs also recorded water levels as shown on the graphic log, and inferred from pore pressure measurements.

2.9 In Situ Tests

SPT test were carried out at 1.5m intervals (as negotiated with WDC Representative J Farrell) in accordance with NZS 4402 Test 6.5.1.

Results are recorded on:

Daily drillers Report (covered under reporting)

SPT sample cards (placed in the SPT samples and kept in appropriate interval location in the core boxes, Figure 3).

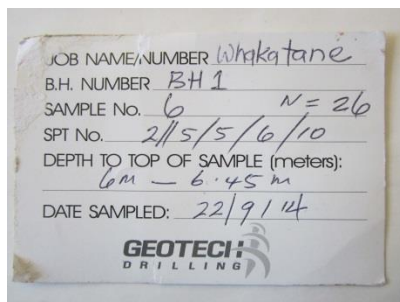


Figure 3. SPT Card BH1 sample and SPT record

2.10. Sampling

2.10.1 Frequency of sampling

Drillhole diameter was 95mm, whole core was extruded into a plastic split tube, then placed in numbered intervals in plastic corrugated core boxes (Figures 4 & 5). The core boxes are stored at the WDC site Keepa Road, Whakatane.

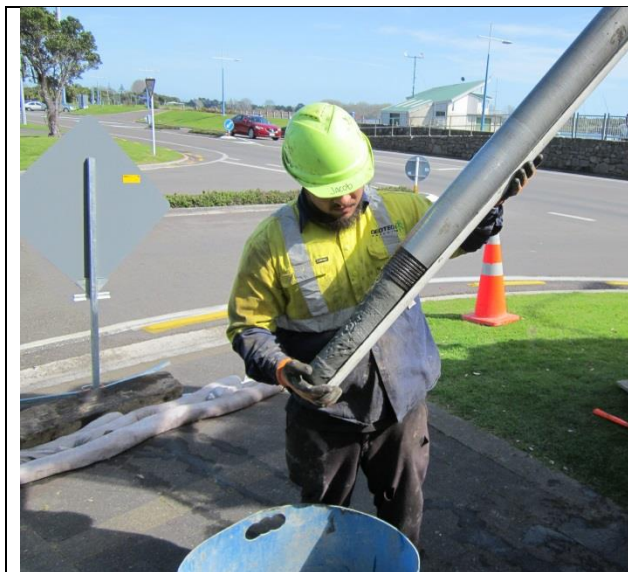


Figure 4. Sonic split sample extrusion



Figure 5. Sonic split tube sample complete



2.10.2 Split Tube Samples

SPT samples were collected, bagged, and inserted in their appropriate locations at 1.5m intervals in the bore hole core boxes (Figures 6 & 7 SPT in operation). Samples were double bagged, with the above sample card inserted between the two encasing sample bags. As noted photographs of the sample in the SPT split were also collected and filed as per “photography”.



Figure 6. SPT hammer in progress



Figure 7. SPT setting up and marking 75mm intervals

2.10.3 Open tube sampling

Sampling by the sonic rig recovers a virtual 100% sample in situ, with some disturbance of the first 450mm where the SPT tube has penetrated. With such a large diameter sample, overall disturbance is minimised, and the whole core is retained in core boxes, metered and numbered consecutively as illustrated in “photography”.

Minor disturbance was noted on the external 5-7mm, due to sonic vibration. A slice was made along the core for effective logging.

Photography

Borehole photography is tabled in individual Borehole folders labelled BH 1-10. Photos are labelled in three categories:

Core box 1-(X)

Full core box photos from commencement to bottom of hole, identified by Box No and interval (Figure 8).

SPT Photos

Individual photographs of each SPT split interval is recorded (Figure 9).



Sonic Rig Core Splits Photos

Several photos are taken to provide closer examination of “in situ” core, these are labelled as split core samples, or close-up photos of particular geological features (Figures 10 & 11).

Photo totals are included in the Bore Hole Logs, but as the photo record is continuous, individual photos are not identified with individual intervals.



Figure 8 Core box WKT BH7 Box 1, 0-3.45m.



Figure 9 SPT record: WKT BH7 SPT 12m.



Figure 10. In situ split tube core: WKT BH7 SPT 12m.



Figure 11. Close-up photo: WKT BH7 splits 15.8m shell beds

2.10.4 Sample records

All samples are retained in consecutively numbered core boxes, as noted above, so individual samples have not been numbered, simply the whole core is retained.

Chip trays have been retained for each hole for diagnostic and convenience purposes. These are “teaspoon” sized samples collected at 1.5m intervals representative of the interval drilled, along with individual units of interest for examination. This short-cuts the process of requiring return to the original core boxes to examine individual features. Currently these chip trays reside at IRBA offices in Belmont, Lower Hutt (Figures 12 & 13).



Figure 12. Chip tray BH 5

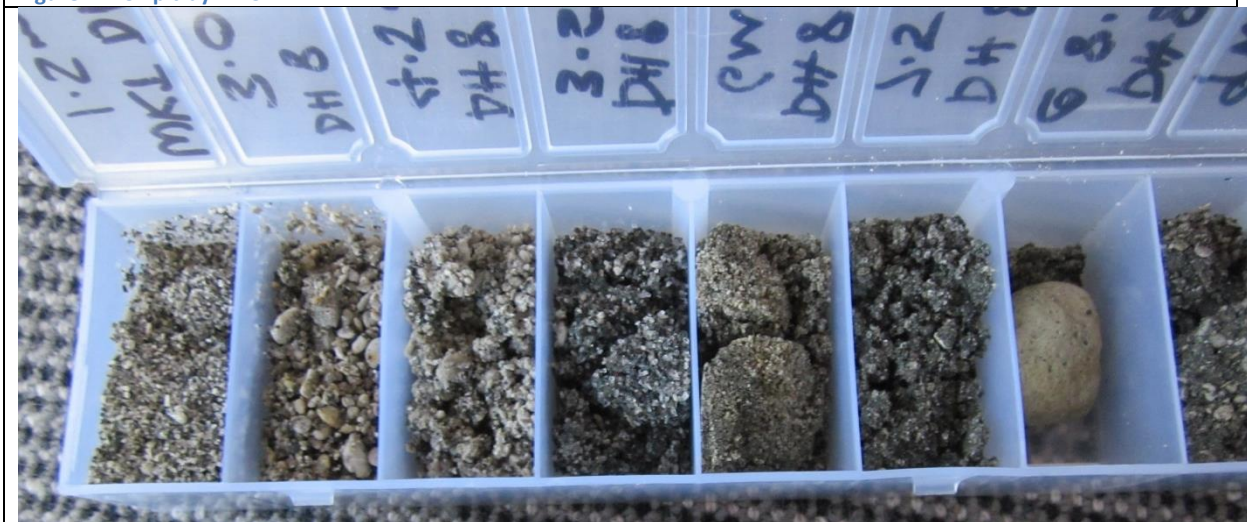


Figure 13. Chip tray close up BH 8

2.11 Decontamination

No contaminated land was encountered

2.12 Backfilling and Reinstatement

All holes were backfilled with material arising from the drilling, and where a shortage was encountered, clean sand supplied by Mitre 10 in bag form was used. Retained grass sods were reinstated, and grass seed sown if required.

Pavement was avoided; minor tarmac disturbance was repaired using an asphalt biscuit.

2.13 Suppliers Records

Geotech reports were maintained daily and representative examples were forwarded to the client early in the programme. These reports comply with “supplier’s records” where appropriate noting the following:



All drillholes were cased, with casing following the drill bit continuously, so no individual recording of casing was made. No drilling fluids were used, occasional water was added to aid lubrication; the volume of water is recorded as used (~1000l/10m drilling).

Drill runs were always 1.5m, so individual drill runs are not recorded, core is recovered in 1.5m intervals. All holes were backfilled with sand purchased from Mitre 10, where appropriate. Water levels were measured using a downhole contact sensing meter and are recorded on the Drillers Daily Report.

Daily Drill Reports 1-10 (Figure 14) GEOTECH daily drilling reports, from site driller, includes water depth readings, SPT's, etc. All bore holes were completed.

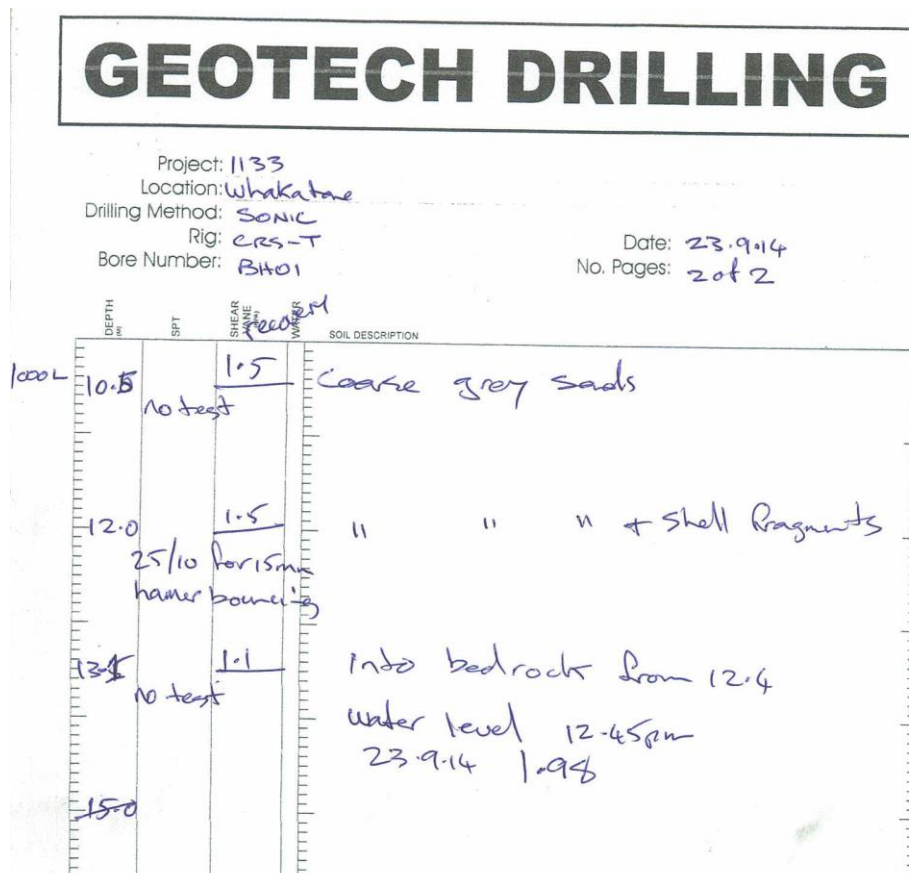


Figure 14 GEOTECH daily drillers report example

2.14 Re-drilling

No re-drilling was required.

2.15 Geological Logging

Detailed engineering logging was completed in accordance with NZGS guidelines. Logging includes complete photographic records and detailed down-hole descriptions in the following three forms:

A3 onsite field geotechnical logging, scanned to file (Figure 15).



DH1 *Color marking for sample near MAJOR discontinuity (approx. 1.2m)*

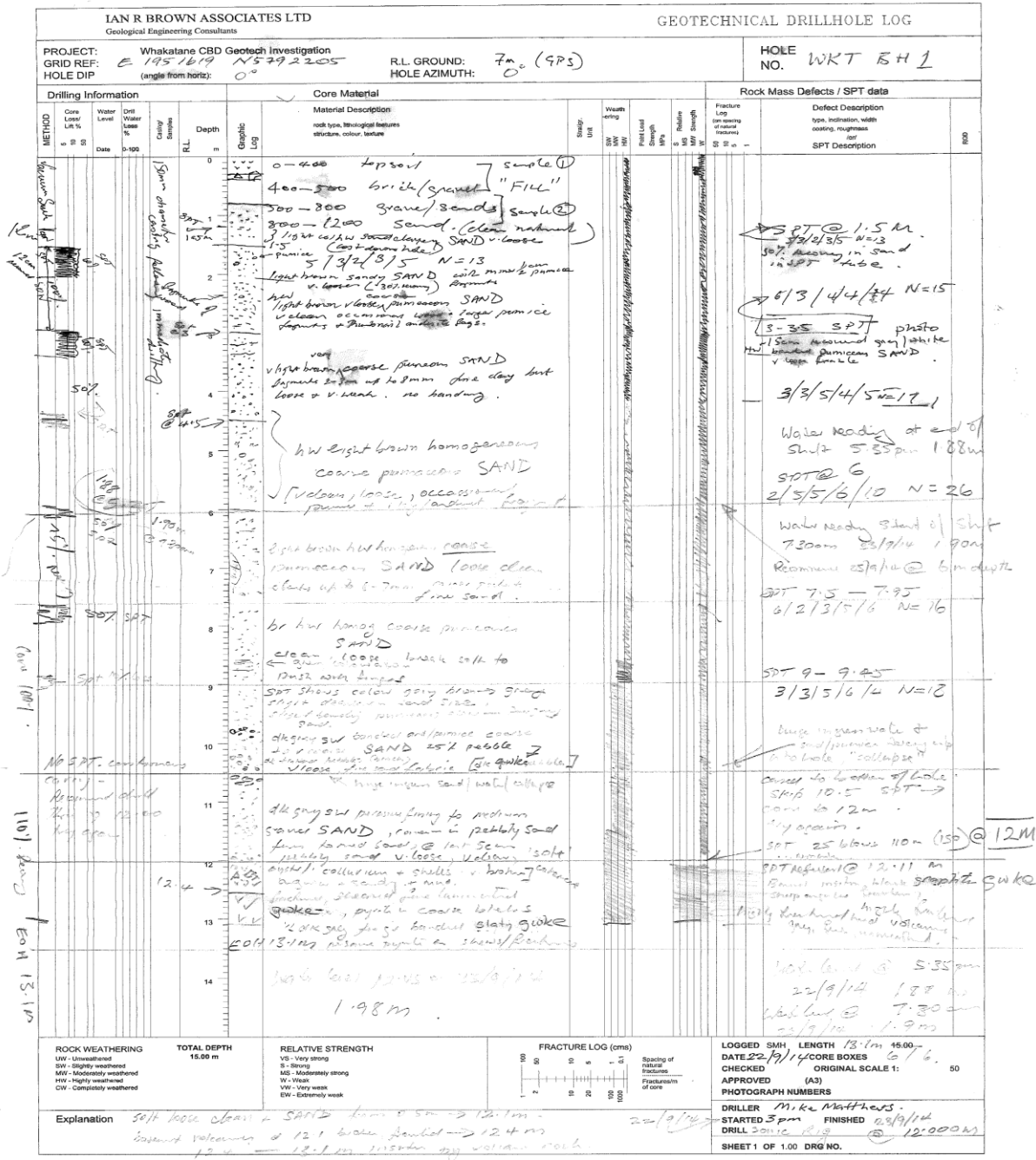


Figure 15. IRBA field geotechnical log (BH 1)

IRBA Geotechnical log (Figure 16)

A3 Geotechnical Log incorporating generalised geology, SPT's, water depths, locations and RL's etc;



| Drilling Information | | Core Material | | | | Rock Mass Defects / SPT data | | | | | | | |
|--|------------------|---|--------------------|--------------------|---------------------|---|---------------|----------------------|---------------------------|-----------------------|---|--|------|
| METHOD | Core Loss/Lift % | Water Level | Drill Water Loss % | Chemical Samples | Depth | Material Description | Stratig. Unit | Weathering | Point Load Strength (kPa) | Relative SPT Strength | Fracture Log (spacing of natural fractures) | Defect Description | NOID |
| | 5 to 50 | Date | 0-100 | | R.L. | rock type, lithological features structure, colour, texture | | SW UW MW | | | | type, inclination, width coating, roughness /or/ SPT Description | |
| Vacuum | | 2014/09/22 | 17:35 | | 0 | TOPSOIL, dark brown | | | | | | | |
| | | | | | 0.5 | FILL, yellow brown bricks, angular greywacke, gravel | | | | | | | |
| | | | | | 1 | SAND, dark grey, poorly graded, soft, very loose, clean loose, estuarine | | | | | | | |
| | | | | | 1.5 | MEDIUM SAND, dark brown, poorly graded, soft very loose, moist. | | | | | | SPT @ 1.5 m 3/2/3/5/13 N = 13 | |
| | | | | | 2 | Clean loose yellow brown limonite stained. | | | | | | | |
| | | | | | 2.5 | COARSE SAND, light brown grey, poorly graded, soft very loose, moist. | | | | | | SPT @ 3 m 3/4/4/4/15 N = 15 | |
| | | | | | 3 | Interbedded finer sand beds occasional pumaceous fragment up to 6-7mm. | | | | | | | |
| | | | | | 4 | | | | | | | SPT @ 4.5 m 3/5/4/5/17 N = 17 | |
| | | | | | 5 | | | | | | | | |
| | | | | | 6 | | | | | | | SPT @ 6 m 5/5/6/10/26 N = 26 | |
| | | | | | 7 | | | | | | | | |
| | | | | | 8 | | | | | | | SPT @ 7.5 m 2/3/5/6/16 N = 16 | |
| | | | | | 9 | COARSE SAND, light grey, wet, uniformly graded, soft, loose, wet. Occasional pumice and greywacke pebbles, inflow of water to hole causing collapse | | | | | | | |
| | | | | | 10 | COARSE SAND, dark grey, poorly graded pebble soft, very loose, moist. Coarse dark gwke, vol pebbles, no fines loose. | | | | | | SPT @ 9 m 3/5/6/4/16 N = 18 | |
| | | | | | 11 | COARSE SAND, green brown grey, poorly graded, soft, loose, moist. Coarse dark gwke pebbles, oyster shells, layered fossil/shell bed immediately above colluvium | | | | | | | |
| | | | | | 12 | COLLUVIUM, dark green grey, poorly graded, stiff, dense, moist. Coarse angular gwke gravel shells, mud. | | | | | | SPT @ 12 m 25 blows for 150 mm refusal | |
| | | | | | 12.5 | GREYWACKE, light grey to grey, hard, very dense. Sheared and clay altered, pyritic slaty greywacke pyrite blebs on fractures. | | | | | | | |
| | | | | | 13 | | | | | | | | |
| | | | | | TOTAL DEPTH 13.10 m | | | | | | | | |
| ROCK WEATHERING | | RELATIVE STRENGTH | | FRACTURE LOG (cms) | | LOGGED SMH | | LENGTH | | CORE BOXES | | 6 | |
| UW - Unweathered SW - Slightly weathered MW - Moderately weathered HW - Highly weathered CW - Completely weathered | | VS - Very strong S - Strong MS - Moderately strong W - Weak VW - Very weak EW - Extremely weak | | | | DATE 2014/09/23 | | ORIGINAL SCALE 1: 50 | | APPROVED IRB (A3) | | PHOTOGRAPH NUMBERS WHK_1 (1-30) | |
| Explanation | | Samples were collected at 0.5m and 1.0m for all vacuumed sections of drill holes. | | | | DRILLER Geotech Drilling Ltd | | STARTED 2014/09/22 | | FINISHED 2014/09/23 | | DRILL Sonic drill rig | |
| | | | | | | SHEET 1 OF 1.00 DRG NO. | | | | | | WHK-DH-321 | |

Figure 16. IRBA Geotechnical Log (WHK BH1)



WKT Drill logs BH1_10 digital records **WKT Drill logs BH1_10.csv**

Sheet 1 CSV files of geotechnical logging

Sheet2 CSV file of geotechnical logging codes

Bore hole locations **WKT_CPT_BH_Collars.csv**.

Water levels, box nos, photos etc. Miscellaneous data collated into digital format on
WKT_BH_corebox_PhotoNo_waterdepths.csv

Collation of all Drill data is supplied in AGS format as WKT_drillholes.ags

These records are stored in the attached WDC Data Inventory.

3 Static Cone Penetration Tests (CPT)

A total of 49 CPTs were surveyed in this investigation, with 46 CPT's being satisfactorily completed. CPT's 16, 44, 45 (all adjacent to outcropping rock) met basement in less than 1.2m, and no CPT was attempted. Note the site geologist investigated all three holes, and with crow bar and examination proved to his satisfaction that basement greywacke was indeed intercepted.

The locations of the CPT holes are illustrated in Figure 27.

3.1 Scope of Work

Testing was all carried out to the requirements of NZS 4402:1986, Test 6.5.3.

3.2 Plant and Equipment

GEOTECH supplied a 2006 Isuzu FVZ1400 4x6 rig with both drilling and CPT capabilities as shown in (Figures 17-20).

3.2.1 Standard Cone

An electrical friction cone was used; note two new cones were supplied from the manufacturer at the commencement of this survey.



Figure 17. GEOTECH CPT rig on Strand, note pedestrian management



Figure 18. GEOTECH CPT rig, zero'ing electrics



Figure 19. GEOTECH CPT rig, computer real time recording




Figure 20. CPT Real time record CPT 17

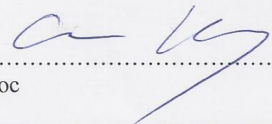


3.3 Checks and Calibration

The following documentation was supplied with the new cones:



CERTIFICATE FOR CPT PROBE **4221**

| | | |
|---------------------|--------------------------|--|
| Probe No | 4221 | |
| Date of Calibration | 20140905 | |
| Replacement of | | |
| Calibrated by | Christoffer Hurtig |  |
| File name | 4221 20140905 111505.doc | |

| Point Resistance | Tip Area 10cm ² | |
|-------------------------|----------------------------|-----|
| Maximum Load | 100 | MPa |
| Range | 100 | MPa |
| Scaling Factor | 850 | |
| Resolution | 0.8976 | kPa |
| Area factor (a) at 1MPa | 0.845 | |

ERRORS
 Max. Temperature effect when not loaded 45.7776 kPa
 Temperature range 0 -40 deg. Celsius.

| Local Friction | Sleeve Area 150cm ² | |
|-------------------------|--------------------------------|-----|
| Maximum Load | 0.5 | MPa |
| Range | 0.5 | MPa |
| Scaling Factor | 3948 | |
| Resolution | 0.0097 | kPa |
| Area factor (b) at 1MPa | 0.001 | |

ERRORS
 Max. Temperature effect when not loaded 0.5917 kPa
 Temperature range 0 -40 deg. Celsius.


| Pore Pressure | | |
|----------------|-------------|-----|
| Maximum Load | 2.5 | MPa |
| Range | 2 | MPa |
| Scaling Factor | 3652 | |
| Resolution | 0.0209 | kPa |

ERRORS
 Max. Temperature effect when not loaded 3.2813 kPa
 Temperature range 0 -40 deg. Celsius.


| Tilt Angle. | Scaling Factor 1 | |
|-------------|------------------|------|
| Range | 0 - 40 | Deg. |

| Temperature sensor. | Scaling Factor 1 | |
|---------------------|------------------|--------------|
| Range | 0 - 40 | Deg. Celsius |

BACK-UP MEMORY



Specialists in
Geotechnical
Field Equipment





CERTIFICATE FOR CPT PROBE **4696**

Probe No 4696
 Date of Calibration 20140908
 Replacement of
 Calibrated by Christoffer Hurtig 
 File name 4696 20140908 104123.doc

| Point Resistance | | Tip Area 10cm ² |
|-------------------------|------------|----------------------------|
| Maximum Load | 100 | MPa |
| Range | 100 | MPa |
| Scaling Factor | 853 | |
| Resolution | 0.8944 | kPa (17 bit resolution) |
| Area factor (a) at 1MPa | 0.805 | |

ERRORS
 Max. Temperature effect when not loaded 62.6080 kPa
 Temperature range 0 -40 deg. Celsius.

| Local Friction | | Sleeve Area 150cm ² |
|-------------------------|-------------|--------------------------------|
| Maximum Load | 1 | MPa |
| Range | 1 | MPa |
| Scaling Factor | 3617 | |
| Resolution | 0.0105 | kPa (17 bit resolution) |
| Area factor (b) at 1MPa | 0.003 | |

ERRORS
 Max. Temperature effect when not loaded 0.8610 kPa
 Temperature range 0 -40 deg. Celsius.

| Pore Pressure | | |
|----------------|-------------|-------------------------|
| Maximum Load | 2.5 | MPa |
| Range | 2 | MPa |
| Scaling Factor | 3493 | |
| Resolution | 0.0218 | kPa (17 bit resolution) |

ERRORS
 Max. Temperature effect when not loaded 1.5260 kPa
 Temperature range 0 -40 deg. Celsius.

| Tilt Angle. | Scaling Factor 1 | |
|-------------|------------------|------|
| Range | 0 - 40 | Deg. |

BACK-UP MEMORY



Specialists in
 Geotechnical
 Field Equipment



Calibration during testing:

Regular testing and checking is demonstrated on the CPT daily record sheet (Figure 25), where tip and friction diameter are recorded, and rod bending tilt angle is noted if changed from vertical.



The cone is zero'd before and after each test and shown on the CPT pdf graph log as 0 and X at the start and end of each test (Figure 26). These are also recorded manually on the record sheet (Figure 25).

3.4 Procedures

GEOTECH used a Ditchwitch Vacuum dredge to excavate starter pits to 1.2m on all CPT holes, using hand and crowbar methods where required (Figures 21-24). The materials were logged, and samples collected at 0.5, and 1.0m to represent the intervals excavated. These samples are labelled and stored in the WDC Keepa Street yard.

Material evacuated was disposed of at a landfill site designated by the BOP Regional Council.(Disposal Manifest is included in Data Inventory under GEOTECH daily reports).



Figure 21. GEOTECH Vacuum trailer



Figure 22. Vacuum wand and crowbar in action



Figure 23. Vacuum wand recovering material



Figure 24. Vacuum debris and fill recovered

3.5 Records and Results

GEOTECH maintains several recording processes in accordance with standard practice.

A daily record sheet (Figure 25) manually records 3.5 (a)—(k), as shown on for 24/9/14.



| JOB NAME: | | JOB NUMBER: | | ADDRESS: | | CLIENT: | | | | |
|----------------------------|---------|--------------|------------|---|----------------|----------------------------|-------------|--------|-------|-----------------------|
| Whakarewa district Council | | | | Whakarewa CBD | | Whakarewa district Council | | | | |
| CONE NUMBER: | | DATE: | | DISTANCE TO NEXT CALIBRATION AT START OF DAY: | | | | | | |
| 4221 | | 24/9/14 | | 1456.4 1463.348 | | | | | | |
| CPT No | TIP DAI | FRICTION DAI | START TIME | QC | FS u2 | U2 FS | FINISH TIME | DEPTH | WATER | GPS POSITION |
| | 31.200 | 31.289 | 7:45 am | 10.97 -0.01 | 235.0 -12.2 | 119.4 0.2 | | | | |
| QC 51255 | 31.200 | 31.289 | 7:40 am | 11.03 -0.06 | 269.3 4.8 | 113.8 0.3 | 8:20 am | 10.545 | 1.8m | |
| QC 41.931 | 31.190 | 31.233 | 8:40 am | 11.00 0.00 | 271.7 -7.9 | 119.1 0.3 | 9:10 am | 7.642 | 1.4m | |
| QC 41.931 | 31.158 | 31.280 | 9:40 am | 11.01 -0.01 | 273.0 1.4 | 119.3 0.3 | 10:00 am | 6.173 | 1.3m | |
| QC 41.931 | | | 10:20 am | 11.03 -0.05 | 275.2 -1.1 | 119.3 0.5 | 10:45 am | 4.496 | 1.7m | Tilt angle 1/4° |
| | 35.882 | 35.998 | 1:00 am | 11.02 -0.04 | 276.6 0.2 | 119.1 0.1 | 11:30 am | 7.117 | 1.8m | |
| | 35.843 | 35.956 | 11:45 am | 11.03 0.02 | 273.3 0.4 | 119.1 0.3 | 12:00 pm | 7.240 | 1.5m | |
| | 35.816 | 35.952 | 12:25 pm | 11.01 -0.05 | 275.0 -1.4 | 119.1 0.2 | 12:50 pm | 8.595 | 1.2m | |
| | 35.810 | 35.946 | 1:15 pm | 11.06 -0.08 | 271.9 1.8 | 119.2 0.2 | 1:45 | 11.065 | 2.6m | |
| | 35.814 | 36.022 | 2:10 pm | 11.02 -0.02 | 277.1 -2.6 | 119.2 0.5 | 1:30 pm | 19.556 | 4.1m | |
| | 35.853 | 36.021 | 3:15 pm | 11.05 -0.01 | 1.4 1.2 | 0.1 0.0 | 4 pm | 17.650 | 1.75m | |
| | 35.850 | 36.003 | 4:50 pm | 11.05 -0.04 | 276.4 -1.1 | 119.4 0.2 | 5:30 pm | 16.685 | 2.0m | |
| | 35.814 | 35.996 | 5:40 pm | 11.03 -0.05 | 273.9 1.1 | 119.5 -0.2 | 6:20 pm | 14.512 | 0.0m | pulled up on friction |

Figure 25. CPT daily record sheet (24/9/14)

These data are then transposed onto clean copy sheets showing CPT records as a graphic log, showing cone resistance qc, sleeve friction fs, friction ratio Rf, and pore water pressure u2 and includes their interpreted soil classification by (Robertson 1990). (Figure 26). Water depth, cone number, tip and sleeve area and cone pressure are unique to each record, along with zero calibration as discussed in 3.4.

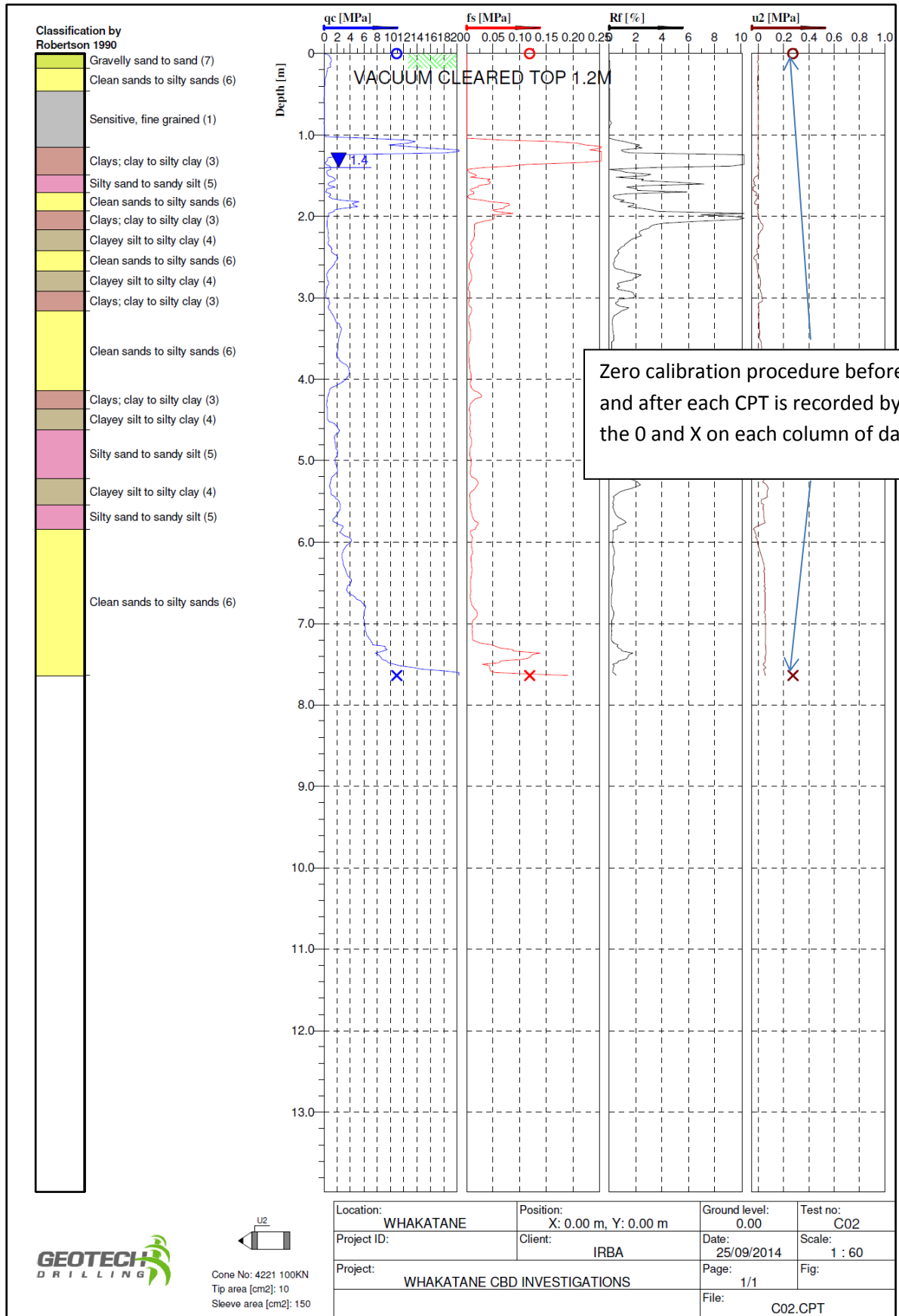


Figure 26. GEOTECH CPT Graph log C02



3.6 Reporting Format

Results of the tests and plots are stored in the attached WDC Data Inventory.

Key Fields:

| | |
|----------|------------------------------------|
| Column A | H is depth |
| Column B | qc is point resistance |
| Column C | fs is friction |
| Column D | u2 is pore water pressure |
| Column E | Ta is tilt angle of the cone |
| Column F | v is speed of penetration |
| Column G | Rf is friction ratio |
| Column H | Uo is Dissipation |
| Column I | qt is Corrected point resistance |
| Column J | ft is Corrected friction |
| Column K | sigmaVo is Total overburden stress |

3.6.1(d) Collar locations of individual CPT are collated in the attached spreadsheet **WKT_CPT_BH_Collars.csv**. Coordinates are in NZTM, located by GPS and aerial photography.

3.6.1(e) Collar elevations have been assigned from EBOP Lidar data (held under licence from Environment Pay of Plenty licence no EBOPIS200305).

3.6.1(a-p) Excluding (d,e) this data is included in the graphic log for each individual log.

3.6.2 (a) Tabulated results in CSV for individual CPT's C01-C49 with the above key fields are tabulated in the WDC Data Inventory.



WDC CBD Data Inventory

Borehole Data

Drive ▶ 1133 WDC CBD Seismic Investigation ▶ Technical Reports ▶ WDC Deliverables ▶ Borehole Data

with ▼ Burn New folder

| Name | Date modified | Type | Size |
|---------------------------------------|-----------------------|----------------------|----------|
| WDC onsite hardcopy geology log.pdf | 31/10/2014 4:10 p.... | Adobe Acrobat D... | 4,470 KB |
| WKT Drill logs BH1_10.csv | 31/10/2014 4:20 p.... | Microsoft Excel C... | 27 KB |
| WKT_BH_corebox_PhotoNo_waterdepths... | 28/10/2014 1:37 p.... | Microsoft Excel C... | 2 KB |
| WKT_BH1_1.pdf | 4/11/2014 3:58 p.m. | Adobe Acrobat D... | 78 KB |
| WKT_BH2_1.pdf | 4/11/2014 4:01 p.m. | Adobe Acrobat D... | 73 KB |
| WKT_BH3_1.pdf | 4/11/2014 4:03 p.m. | Adobe Acrobat D... | 73 KB |
| WKT_BH4_1.pdf | 4/11/2014 4:04 p.m. | Adobe Acrobat D... | 78 KB |
| WKT_BH5_1.pdf | 4/11/2014 4:37 p.m. | Adobe Acrobat D... | 79 KB |
| WKT_BH5_2.pdf | 4/11/2014 4:39 p.m. | Adobe Acrobat D... | 71 KB |
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| WKT_BH6_3.pdf | 4/11/2014 5:12 p.m. | Adobe Acrobat D... | 64 KB |
| WKT_BH7_1.pdf | 4/11/2014 5:14 p.m. | Adobe Acrobat D... | 86 KB |
| WKT_BH7_2.pdf | 4/11/2014 5:18 p.m. | Adobe Acrobat D... | 69 KB |
| WKT_BH8_1.pdf | 4/11/2014 5:20 p.m. | Adobe Acrobat D... | 78 KB |
| WKT_BH8_2.pdf | 4/11/2014 5:21 p.m. | Adobe Acrobat D... | 68 KB |
| WKT_BH9_1.pdf | 4/11/2014 5:22 p.m. | Adobe Acrobat D... | 79 KB |
| WKT_BH10_1.pdf | 4/11/2014 5:23 p.m. | Adobe Acrobat D... | 73 KB |
| WKT_CPT_BH_Collars.csv | 31/10/2014 4:19 p.... | Microsoft Excel C... | 4 KB |
| WKT_drillholes.ags | 5/11/2014 2:31 p.m. | AGS File | 118 KB |

Borehole Photos

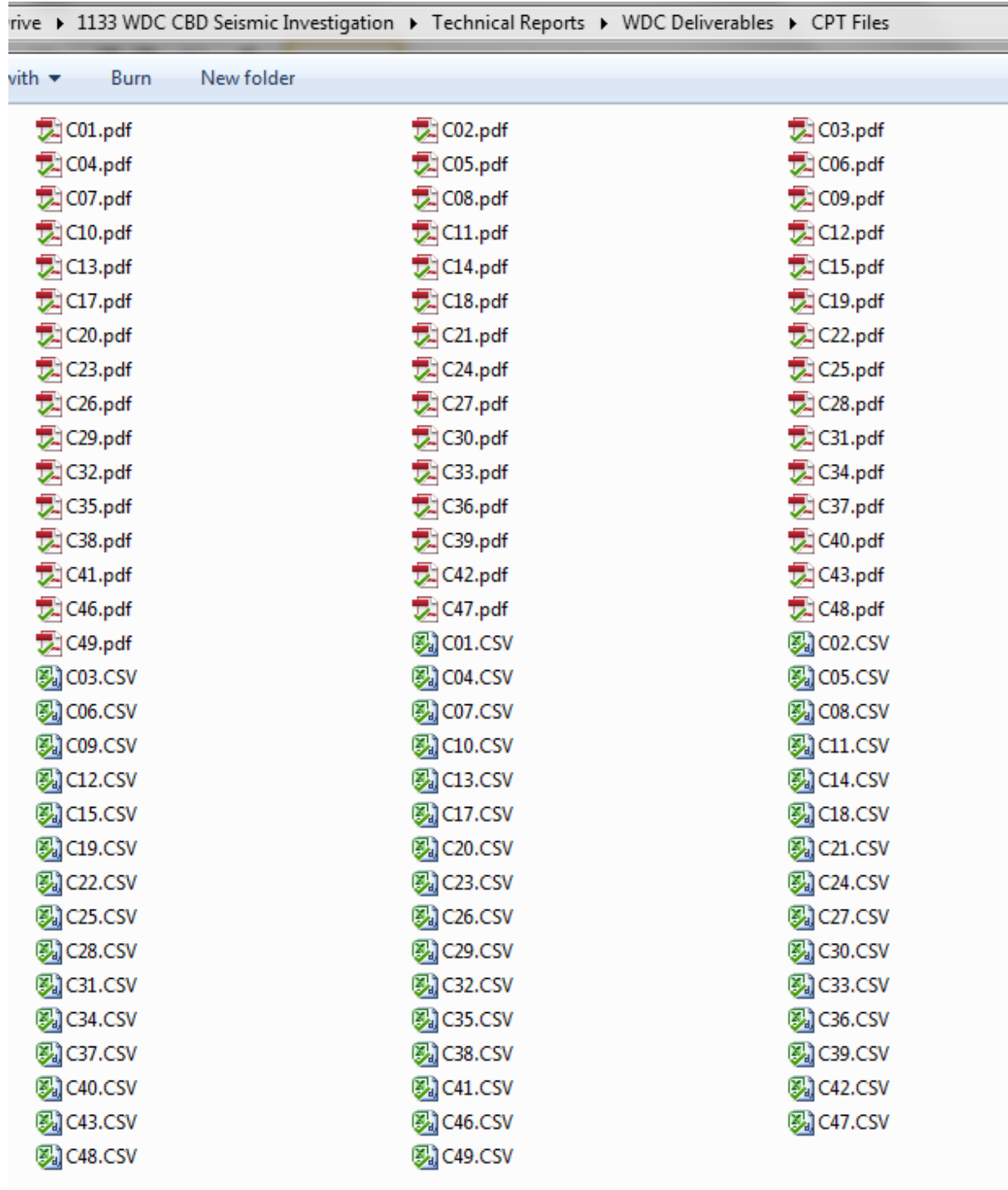
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CPT Files






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|  DailyDrill Reports 1-10.pdf | 6/10/2014 2:44 p.m. | Adobe Acrobat D... | 4,063 KB |

SPT Results

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|  WKT BH1-10 SPT's.xlsx | 17/10/2014 2:31 p.... | XLSX File | 17 KB |